REMARKS

The Examiner's action of February 23, 2005 is noted in which the claims are finally rejected under 35 USC 103 as being unpatentable over Kabler et al. in view of Dalal et al. and also Kabler et al. in view of Dalal et al. in view of Kalis.

First, with respect to Kabler et al., the Examiner admits that there is no shielding. The Examiner says that Kabler et al. teaches the use of a motherboard and separation of the GPS and cellular phone antennas.

Spacing alone for RF interference will not work and does not work. The challenges in locating a GPS receiver in a cell phone that has a transmitter is that it is virtually impossible to shield the GPS from the radiated interference because if one places the GPS receiver in a Faraday shield, this will shield out the interference, but then one cannot get GPS signals into the GPS receiver.

Specifically, the Examiner cites Dalal et al. to cite a method of reducing radiation by using a Faraday shield.

If one could get away with using a Faraday shield, then a lot of the problems in placing GPS in cell phones would be eliminated. However, if one puts a Faraday shield around the GPS antenna and the GPS receiver, of course one gets a radiation shield; but one does not get a GPS signal into the receiver.

Kabler et al. tried to solve the problem by separating the two antennas but this does not work.

Applicant had thought to completely surround the cell phone with a Faraday shield but there are holes in the cell phone case for the display, buttons and the like. and it would not have

mattered anyway even if one could provide such shielding. It turns out that in the construction of cell phones there is a radiated component that is "right down the throat" of the GPS frequency, namely 1.57542 GHz. This is generated as discussed in the previous Amendment on Page 7, where it is said that:

> "Testing revealed the following: Assuming that the cellular control channel is 832 MHz and considering that double 832 is 1664 MHz, then understanding that most cell phones have a 100 MHz up-convert or down-convert, subtracting 100 MHz from 1664 gives 1.574 GHz. What this means is that the cell phone-induced interference is almost right on top of the GPS frequency of 1.575 GHz."

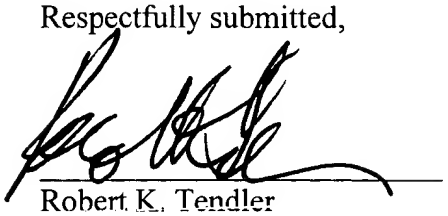
To summarize, it is the genius of this invention that one can sufficiently knock down RF that is floating around that would interfere with the minute GPS signals by having a kind of RF sump, which is markedly not a Faraday shield because it does not surround anything. It was not entirely clear that this would even work but it was also clear that one could not provide Faraday cage-type shielding that would knock down the 1.57542 GHz component that is normally generated by the cell phone.

To be clear, this technique reduced time to first fix on a hot start from over 30 seconds to less than 9 seconds for an unassisted GPS. This was a startling result that made the difference between a useable emergency GPS system and one that simply would not lock up in time.

There is nothing so un-obvious as putting this one-sided shield in because one would expect the RF to come in from all sides anyway. Also it is not entirely clear why it works. What is clear is that it works.

Allowance of the claims and issuance of the case is earnestly solicited.

Respectfully submitted,



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